

REMARKS

Introduction

Applicant wishes to commend Examiner Hogan and Supervisor Scherbel for an exceptionally thorough examination and detailed Office Action. Applicant further thanks the Examiner for his thoughtful approach to furthering the examination of claims 16 and 17 even though they had been erroneously designated by Applicant with inaccurate dependency.

As should be apparent herebelow, applicant has reviewed and carefully considered the information presented in the Examiner's Office Action and has responded accordingly. As will be evident, Applicant has taken positive effort to move the present application to issue.

While the Examiner apparently did not find fault with the application specification, Applicant requests minor editorial amendments thereto to address informalities. The minor nature of these changes will be apparent on review. Care has been taken to avoid inclusion of NEW MATTER. Further, amendments are requested for all of the rejected claims. It is sincerely believed that Applicant's response taken as a whole clearly removes all outstanding issues.

Regarding Informalities in the Specification

Regarding Changes for Section: BACKGROUND OF THE INVENTION, Prior Art, specifically on Page 1, in the paragraph defined by lines 12-15, amendments

are requested to point out that, as is well known, water flow from a shower is “continuous” when turned on, and the flow is along a pathway with an “upstream portion and downstream portion at the head.” These terms, of course, represent universal dynamics of shower function and do not comprise new matter. They also are clearly consistent in scope and content with the drawings and the remaining text.

Regarding Changes for Section: BRIEF SUMMARY OF THE INVENTION

specifically on Page 2, in the paragraph defined by lines 8-12, these are requested for reasons that are minor and merely for readability. The phrase “to be retrofittable to a prior art showerhead...or to be provided in a new showerhead...” would be changed as proposed to more properly read: - - to present a device that may be retrofitted to a prior art showerhead system... or provided with a new showerhead system... - - . These minor, non-substantive editorial changes would not raise issues of new matter.

Further relative to Page 2, in the paragraph defined by lines 13-22, the passage amended to read, “an air pathway communicating with the water pathway and disposed along said water pathway upstream of the spray holes...” is merely clarifying the text to match what is clearly shown in the drawings, and to maintain claim and specification terminology consistent.

Similarly, the phrase amended to read, "flexible membrane which is pushed by a raised level of water pressure against said hole when the water is turned on, and retracted from the hole when the water is turned off and the pressure subsides..." is consistent with the preexisting explanation and drawings, and also maintains claim and text terminology consistency. These items do not introduce new matter.

Regarding Claim Objections

The Examiner objects to Claims 16 and 17 as being improperly listed as dependent on non-elected Claim 14. The Examiner correctly assumed that the intended parent claim to which Claims 16 and 17 should have referred is Claim 15, and generously took action accordingly. As required by the Examiner, Claims 16 and 17 are herein amended to depend from parent Claim 15.

Regarding Claim Rejections – 35 USC 102(b)

Claims 1 and 3 are rejected by the Examiner as anticipated by US Patent 3,962,733 to Parry, henceforth referred to as Parry. With respect to Claim 1, the Examiner views Parry as disclosing a showerhead device with an air pathway (35) positioned along a water pathway (13) upstream of spray holes (unnumbered, un-shown, but implied) in a showerhead (15).

When water is turned off, Examiner notes, "air is drawn through the air pathway the said (*sic*) showerhead above the spray holes to enable said showerhead to drain more completely." Applicant believes the examiner is saying that the air is drawn through the air pathway (35) to the showerhead. Regarding Claim 3, the Examiner asserts that Parry's air pathway is positioned in add-on tubing (13').

First of all, Parry presents an industrial shower facility for emergency use. Parry's rugged, harsh environment system is anything but the "typical showerhead" system suggested by Applicant's own disclosure as commonly found in a domestic situation. Though the presence of a head with outlet shower holes is asserted by the Examiner as being "implied," the Parry patent disclosure falls short of possessing the necessary "anticipatory" traction of a reference introduced and applied under 35 USC 102(b).

Parry's system is an all-weather safety shower constructed to withstand extreme levels of heat or cold, and required to stand ready for emergencies arising in an industrial setting. The only environmental concern expressed by Parry is that water in his patented system, when utilized in certain harsh climes, will become so cold as to freeze or, in tropical climes, so overheated as to impart injury. Frozen or scalding, industrial systems of the nature addressed by Parry are unusable without Parry's improvements.

Notably, there is no concern expressed by Parry for unsightly or inefficient clogging of showerhead outlet holes, if indeed his showerhead has such holes (and we have no way of knowing this). In harsh industrial settings, appearance is not a virtue; neither is the softened sprinkle of a typical, domestic showerhead. Moreover, Parry expresses no concern for water dripping or forcefully projecting from his various pipes and relief tubes as water is relieved to avoid freezing or excess heating.

In a relatively crude industrial setting, such spills would not be a problem and, indeed, according to Parry such spills are crucial to the performance of his system. Clearly, this is unlike the typical shower environment Applicant envisions for the present invention.

Parry's weep hole (in piping section 13') which is drained by a hose or tube (35) assists in the draining of the piping. In the context discussed by Parry, the purpose of the draining activity appears the same as for Parry's other draining features, that is, to avoid freezing or dangerously excessive heating of water therein by preemptive draining of the water. The weep hole also serves as an air vent facilitating the gravity flow of water from piping (13') through the showerhead (15), and apparently for the same reason, i.e., to avoid freezing or overheating of the interior water.

While details of Parry's disclosure do appear at first blush to "read" on Applicant's Claims 1 and 3, the fact that Parry's system does not recite or describe the "anti-clogging showerhead" claimed by Applicant cannot be lightly dismissed. Neither should the industrial nature and purpose of the Parry system be dismissed since it clearly differs considerably from Applicant's invention.

That said, and in order to advance prosecution of Applicant's claims to the point where they will be given favorable consideration, Claims 1 and 3 have now been amended to more clearly and decisively define over Parry. Applicant does this by the amendatory insertion to all pending claims that the presently claimed non-clogging showerhead device features a "valve positioned at said water pipe along said water pathway upstream of said spray holes in said head." Regardless of the present details expressed in Parry, the nature of the Parry system is that the weep holes provided therein must remain open at all times and thus would not for any reason welcome addition of a valve, either manual or automatic.

The valve of Applicant's claimed system is particularly important when viewing the problematic aspects of Parry's own system. Under the relatively high showerhead pressures contemplated in Parry's system, a steady and likely high pressure stream of water will constantly project forcefully from Parry's weep hole through the tube (35).

Users of traditional (non-industrial) shower systems such as those most typically found in domestic bathrooms or sports facilities could not tolerate Parry's arrangement, though the constant weep hole feature is obviously demanded in Parry's rugged and hostile environment. Applicant urges that this valve feature alone and in combination with all the other features set forth in Claims 1 and 3 render them patentable.

Regarding Claim Rejections – 35 USC 103 (a)

Turning again to the Examiner's action, he rejects Claims 6, 10, 11 and 15-17 under 35 USC 103(a) as unpatentable over Parry (as previously applied) in view of the patent to Burke. Referring to the rejection of Claim 1 "as the basis for the following" the Examiner notes that Parry's disclosure does not teach the airpath comprised of an automatic valve. According to the Examiner, the secondary reference "Burke teaches an automatic valve which is automatically closed when fluid flows through it, and automatically opened when fluid is not flowing." With respect to Applicant's Claims 10 and 11, the Examiner asserts that Burke's rubber membrane in the form of tapered tubular sleeve (40) is moved against the hole (28) when fluid flows through the valve (apparently meaning rubber valve element 40).

The Examiner goes on to assert that Burke's tapered tubular sleeve (40), , is automatically retracted when fluid is not flowing this [sic] admitting air through the

hole. Referencing Applicant's Claim 15 and including the phrase, "as in a combination," the Examiner asserts that Parry's patent discloses a showerhead device, having air pathway (35) along water pathway (13) upstream of spray holes ("not numbered or shown, but implied") in a showerhead 15, and concludes that "when water is turned off, air is drawn through the air pathway [sic] the said showerhead above the spray holes to enable said showerhead to drain more completely."

Continuing, the Examiner notes that Parry (the primary reference in the Examiner's proposed combination system) also teaches that the air pathway is positioned in a segment of add-on tubing (13') for connecting between the showerhead and a water pipe. Then, the Examiner concedes that "Parry does not teach the airpath comprised of an automatic valve." As a remedy, the Examiner then turns to Burke's patent asserting that Burke teaches an automatic valve "automatically closed when fluid flows through it, and automatically opened when fluid is not flowing."

Extending his rejection to Applicant's Claims 16 and 17, the Examiner notes that the valve of Burke comprises a hole (28) and a resilient rubber "membrane" in the form of a tapered tubular sleeve (40)...moved against the hole when fluid flows...and automatically retracted when fluid is not flowing this [sic] admitting air through the hole."

Following this, the Examiner summarily concludes: "it would have been obvious to one having ordinary skill in the art...to have modified the add-on tubing as part of the showerhead device of Parry...with the automatic one-way valve of Burke...to provide a showerhead device that drains automatically after use so that microbiological particles cannot grow during the devices [sic] stagnancy and clog part of the showerhead device."

Applicant appreciates the Examiner's considerable efforts in searching and finding prior art that, in the Examiner's view, might apply to the claims as initially presented. However, and with all due respect, Applicant must disagree with the Examiner's interpretation of certain aspects of these two patents (Burke and Parry) and his conclusion in rejecting all claims to the species presently elected.

First of all, and for the record, Applicant wishes to derive a clear understanding of the Examiner's characterization of the Burke reference. In Examiner's assertion that: *"Burke teaches an automatic valve which is automatically closed when fluid flows through it, and automatically opened when fluid is not flowing..."*, it is presumed that Examiner's reference is attributed to an automatic valve comprised of valve member 40 external surface 40b pressing against casing 10b) being closed when fluid flows through valve 40 at slits 44, 45. Burke does not teach closing of holes 28; on the contrary, these remain open and spaced from rigid sleeve 32. Membrane 40 never touches holes 28, but rather engages interior surface 10b of the casing to stop and start air flow.

Another point to be clarified for the record is that that Applicant's showerhead system and the (proposed) combined systems of Parry and Burke are not concerned with growth of microbiological particles either on a showerhead or elsewhere. Burke is concerned about preventing contamination of the water supply upstream of the deliver end of his system, but can do nothing to prevent such microbiological particles from growing on the outlet end thereof. This point is further addressed herebelow.

Turning now to a still closer inspection of Burke's device, it is seen that his patent represents a CLOSED system of pressurized pipes used in an environment which may include waste, sewage or contaminated water. Essentially, such an environment demands anti-backflow protection to avoid suction of such contaminants into the water supply upon head failure or a stoppage of upstream water pressure. Applicant's valve on the other hand is used in an OPEN system which has no need for anti-backflow protection since none would occur. The showerhead is the OPEN END of the line, so pressure always drops to atmospheric level following cut-off of the water flow. In other words, if there were a sudden drop in feed from Applicant's water source, water and other materials would not be subject to being sucked upstream into the showerhead.

So, while Burke serves a commendable purpose in preventing unwanted siphoning in a closed piping system, it finds no place (obvious or otherwise) in an

open showerhead system of the Parry type. Hence, Applicant's position is that a skilled artisan would have no reason to turn to Burke's technology since the latter is inconsistent with the Parry environment and, besides that, the problem and application Burke is designed to address are not present in Parry.

Another key point to be made with reference to the Burke patent is that water collected in the closed outlet end of Burke's nozzle (40) defined by self-closing slits (44, 45) will not be evacuated by opening an air passage to holes 28. This is because the air is admitted so as to flow past the nozzle (40). Thus, the water trapped in Burke's nozzle tip will pose problems if assigned to duty in Parry's system as the Examiner proposes.

Specifically, trapped water may freeze or overheat as already pointed out by Parry, or there may be clogging by dried mineral deposits as suggested by Applicant, or there will be bio-buildup as suggested by the Examiner. In any case, Burke's device is not suited to the showerhead system presented by Applicant and cannot reasonably be combined with the Parry system for reasons that should be appearing "obvious." And certainly there would be no motivation to combine the references Burke and Parry for curing Burke's bio-buildup issue for two reasons: (1) neither Burke nor Parry faces bio-problems, and (2) such a combination would not cure the bio-problem if it did exist, and for the reason just explained.

Parry, as stated above, is concerned with maintaining capacity for readily venting water for the reasons noted. To apply a valve to the weep holes and thus indefinitely closing those passages that are crucial to Parry's operation, would not be viable. Moreover, even if Parry were to permit the risky closing of the weep holes by means of a valve, it certainly would not be through the use of a valve as presented by Burke.

Burke, as pointed out above, presents a nozzle system that does not drain when water flow is cut off, even with an air bypass as provided by holes (28). If supplied with Burke's valve (against all suggestions in Parry), the negative impact for Parry would be a valve nozzle that would retain water which itself would be subject to the very severe conditions that drove Parry to create the unblocked weep hole in the first place. In other words, Parry modified by Burke would likely disable the Parry system.

Combine all this with the fact that it is not at all apparent that Parry even is in possession of a showerhead with holes subject to clogging. And even if Parry can be construed to have such holes there would apparently be no concern on the hostile industrial scene for unsightly hole-clogging and, thus, no motivation to modify Parry (under 35 USC 103) with a valve as suggested by the Examiner.

Beyond these arguments set forth above, which in themselves are believed to be compelling, Applicant's claims have been amended to further distance them from

the applied prior art and all prior art cited in the Examiner's Office Action. For

example, the following details are added to currently amended Claim 1:

"a head having spray holes;"

"water pipe having... continuous water pathway;"

"valve positioned at said water pipe along said water pathway upstream of
said spray holes in said head;" and

"said valve defining an air pathway communicating with said water
pathway."

These amendments clearly define over Parry alone, and Parry in view of Burke.

Similar amendments have been introduced into the more detailed Claims 15-17.

It is sincerely believed that Claims 1, 3, 6, 10, 11 and 15-17 as presently
amended warrant favorable consideration by the Examiner and allowance of
such claims is earnestly and respectfully requested. Further, with the allowance
of Claim 1, it is respectfully requested that Examiner examine others of the
currently withdrawn claims as would be appropriate under the Manual of Patent
Examining Procedure guidelines.

Other Cited Prior Art

The references cited by the Examiner on form PTO-892 accompanying the Office
Action have been reviewed by Applicant who asserts his agreement that the
invention presently claimed clearly defines over these cited prior art showings,

specifically: hand shower (Heimann et al.), emergency shower (Terek et al.)
check-and-vent valve (Langdon), drain valve (Wittner et al.), vented faucet
(German DE 3934216).

SUMMARY

The Examiner's thorough Office Action rejected Claims 1, 3, 6, 10, 11, 15, 16 and 17. The Examiner's rejections were applied under 35 USC 102 (b) as based on a patent to Parry, and under 35 USC 103 as based on Parry in view of Burke. Rejected Claims numbered 1, 3, 6, 10, 11, 15, 16 and 17.

Applicant's response has pointed out that the Parry patent does not include the elements recited in the claims, particularly as currently amended and presented for reconsideration. Applicant further pointed out that the combination of references Parry and Burke is not only unobvious, but it is inappropriate and unworkable. Applicant concludes that the present claims as amended clearly define over these references and other known prior art.

Claims 16 and 17 had been objected to, and corrective action has been taken by Applicant to overcome this objection. Specifically, Claims 16 and 17 now clearly depend from parent Claim 15.


While reviewing the specification, Applicant discovered minor informalities. Corrections for those informalities have been presented. It is Applicant's sincere belief that none of the presented amendments raises issues of New Matter.

Thus, entry of the proposed amendments is requested along with an early and positive reconsideration of outstanding rejections and objections.

IN CLOSING

Finally, should the Examiner find that issues remain unresolved, including but not limited to any additional fee payments required for extension of time for response to the outstanding rejection, and which issues could be eliminated through discussions with Applicants' representative, he is invited to contact the undersigned by telephone in the mutual interest of expediting prosecution.

Respectfully submitted on behalf of Applicant,



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